Chapter 2

Alternatives

This chapter discusses the alternatives considered and the alternative considered but eliminated from detailed study, and provides a comparison of the environmental impacts of the alternatives.

Alternatives Considered in Detail

This section describes the alternatives considered in detail, including the No Action Alternative, which the National Environmental Policy Act (NEPA) requires be evaluated, and which is used as a base to compare impacts of the alternatives.

Reclamation proposes under the two action alternatives to adjust the federally recognized boundaries to make them consistent with the State boundaries. Only a portion of the lands potentially to be included in the federally recognized district boundaries would be eligible to receive McKay Reservoir storage water from Westland's allocation.

No Action Alternative

The irrigation district boundaries would remain as they are, and Reclamation would not provide federally allocated Project water to lands outside the currently recognized irrigation district boundaries. Temporary water service contracts for Project water deliveries to out-of-boundary lands would no longer be issued.

Westland's repayment contract would not be modified under this alternative, and all water supplied under the existing contract would have to be applied within the existing federally recognized irrigation district boundaries. Use of federally supplied water from McKay Reservoir would have to comply with the terms of the existing contracts and State water right certificate. Figure 1 shows the No Action Alternative boundaries.

Partial Adjustment Alternative

Under this alternative, Westland's boundaries would be adjusted to include category I and category II lands, which would increase Westland's size by 1,482.3 acres. Category I lands are lands with primary (decreed or permitted) and

secondary (McKay Reservoir certificate 79439) water rights which are being assessed, but which were inadvertently omitted from the district boundaries. Category II lands are lands outside the district boundaries to which water rights were transferred, pursuant to Oregon law, from lands which were included within the district boundaries. The full water supply would be used on the current and adjusted boundaries. To adjust Westland's boundaries under this alternative would require a supplement to their 1949 Amendatory Contract with the United States. Water use would need to comply with the terms of the amended contract and State Water law. Figure 2 shows the Partial Adjustment Alternative boundaries.

Full Adjustment Alternative

Under this alternative, Reclamation would fully implement a district boundary adjustment for category I, II, and III irrigated lands. Category III lands are lands that lie outside Westland's boundaries, and consist of 8,855.5 acres of which 5,759 would be irrigated in any given year. The total adjustment under this alternative would include up to 10,338 acres on which federally supplied water from McKay Reservoir could be used. To adjust Westland's boundaries under this alternative would require a supplement to their 1949 Amendatory Contract with the United States. Water use would need to comply with the terms of the amended contract and State water law. Figure 3 shows the Full Adjustment Alternative boundaries.

Summary of the Alternatives

The alternatives are summarized in table 1, shown on the next page.

Summary Comparison of the Environmental Impacts of the Alternatives

For this evaluation, a hydrologic model was developed for the lower Umatilla River. The model was used to estimate the hydrologic impacts of using a portion of Westland's McKay Reservoir storage on lands currently outside of its federally recognized boundary. The estimated flows for the lower Umatilla River, generated by the model, formed the basis for the analysis.

To assess the differences among the alternatives, the environmental impacts of each alternative are compared against the environmental impacts that would result under the No Action Alternative. The environmental consequences of all the alternatives are described by resource or environmental factor in chapter 3. The terms "environmental consequences" and "environmental impacts" are synonymous in this document.

Table 1.—Features of the alternatives

Description (irrigated acreage)	Alternatives			
	No Action	Partial Adjustment	Full Adjustment Irrigated	Full Adjustment Total
Current Westland boundary (acres)	7,437	7,437	7,437	7,437.0
Category I Category II		398.4 1,083.9 1,482.3	 1,482.3	398.4 1,083.9 1,482.3
Category III (total acres) (irrigated acres from storage)			 5,759 [1/]	8,855.5
Total additional acres Total irrigated acres from storage Total Westland acres	 7,437 7,437	1,482.3 8,919.3 8,919.3	7,241.3 14,680	10,337.8 17,774.8
Water use	Not outside current Federal boundary; no temporary water contracts	Full water use on current and adjusted lands	Full water use on current and adjusted lands	
Description of change	Cease issuance of temporary contracts for Project water delivery to out-of-district lands	Correct past administrative oversights of lands not included that district claimed were transferred and inadvertently omitted	Includes all lands that currently have a temporary water service contract to receive Project water	

[1/] Of 8,855.5 acres of category III lands, 5,759 acres are to be provided storage water and included in the adjustment in any given year.

Adjustment of the existing federally recognized boundaries for Westland Irrigation District has been shown by this modeling effort to potentially reduce flows, during certain periods of the year, in the Umatilla River. These impacts are in several locations along the Umatilla River and in McKay Creek below McKay Reservoir:

Upstream of the Westland diversion: Impacts to the Umatilla River are due to differences in the timing and magnitude of storage water releases from McKay Reservoir. These differences reflect the different management scenarios of the modeled alternatives. The impacts are monthly variations that occur during the irrigation season. Diversions are higher in July and August and lower in June, September, and October for the boundary adjustment alternatives. It is important to note there is no difference in annual diversion volumes; the annual amount of water being diverted is equivalent for all of the modeled alternatives.

Downstream of Dillon diversion: Impacts to the Umatilla River are a result of differences in the timing and magnitude of return flows from Westland. The impacts, estimated by the model, to flows below the Dillon diversion are smaller than the errors in the actual streamflow measurements

used as input for the model. Average annual modeled return flow impacts were 895 acre-feet for the Full Adjustment Alternative. However, full mitigation is provided for the impact to reduced return flows.

The model identified an effect on West Extension Irrigation District (West Extension) because West Extension's irrigation water is, in part, based on return flows from upstream irrigators. Based on the hydrologic modeling done for the EA, the preferred alternative would reduce flows at Threemile Falls Dam during the irrigation season. This would reduce the amount of water available for diversion at Threemile Falls Dam by West Extension in July, August and the first half of September by 450 acre-feet. It should be noted that the impacts estimated by the model are smaller than the errors in the actual streamflow measurements used as input of the model. Because Westland will address this concern by obligating 500 acre-feet of McKay water as part of the proposed action for use by West Extension, any potential impact to West Extension is alleviated. The 500 acre-feet accounts for conveyance losses from McKay to Threemile Falls Dam. Allocation and distribution of this water will comply with Oregon State Water laws.

Therefore, the analysis of the hydrology has determined that no major impacts would occur from implementation of either the Partial Adjustment or Full Adjustment Alternatives. Because the hydrology impacts are minor, any other resource that depends upon hydrology also would be minor.

Alternatives Considered but Eliminated from Detailed Study

The alternative to implement the proposed boundary adjustment for only category I irrigated lands (398.4 acres) was considered but eliminated from further study. Westland has indicated they would not accept a boundary adjustment of only Category I lands, partly because it is less than 400 acres. It is not reasonable for Westland to go through a contract modification to include just that small area. They would accept only an adjustment of 1,482.3 acres that includes the entire area of oversight (the Partial Adjustment Alternative) or the Full Adjustment Alternative.